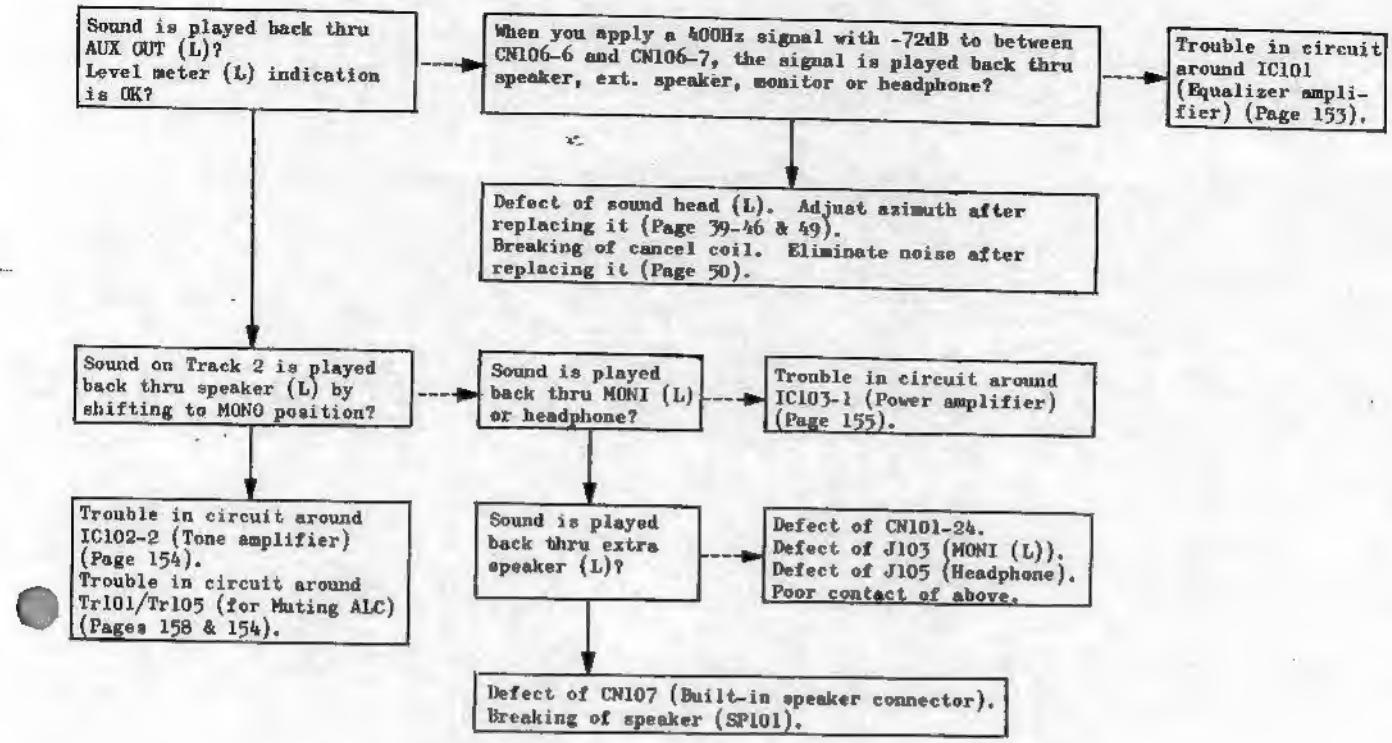
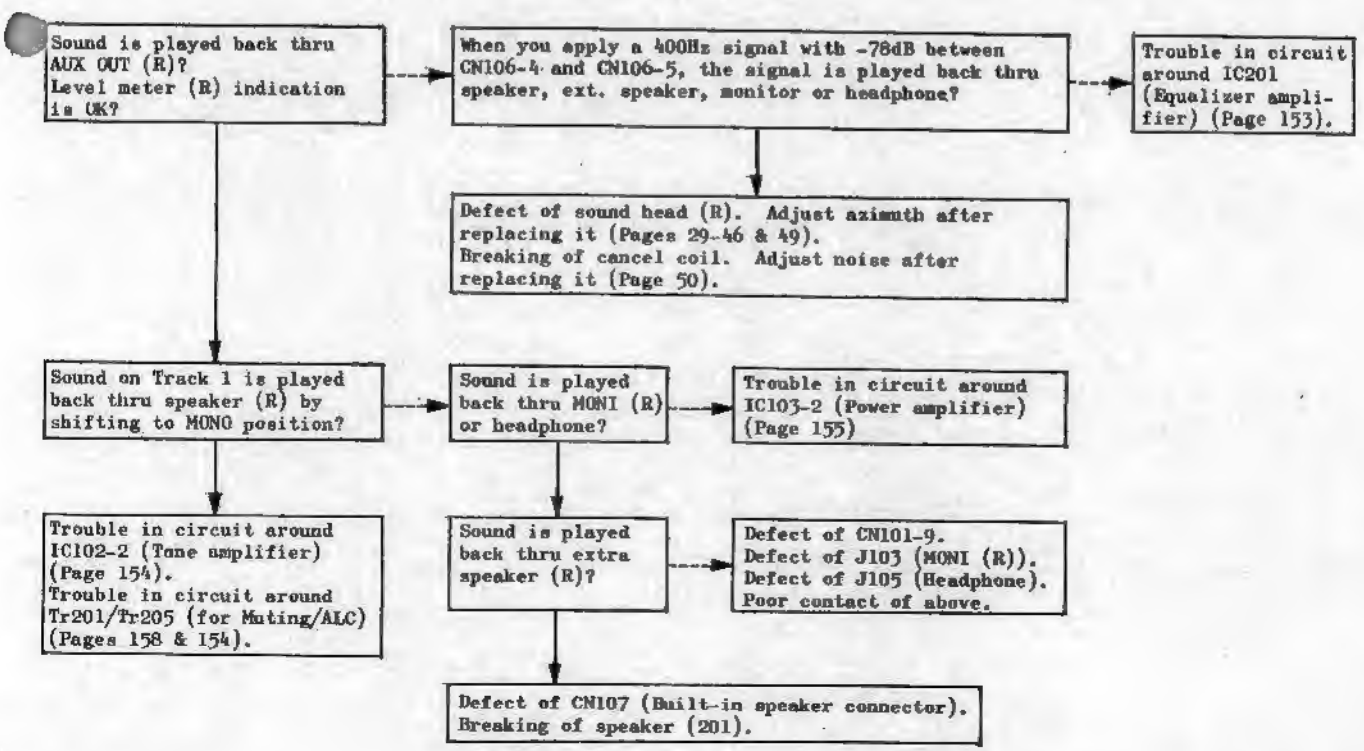
D. Troubleshooting

SOUND ISN'T PLAYED BACK THRU SPEAKER OF L-CHANNEL

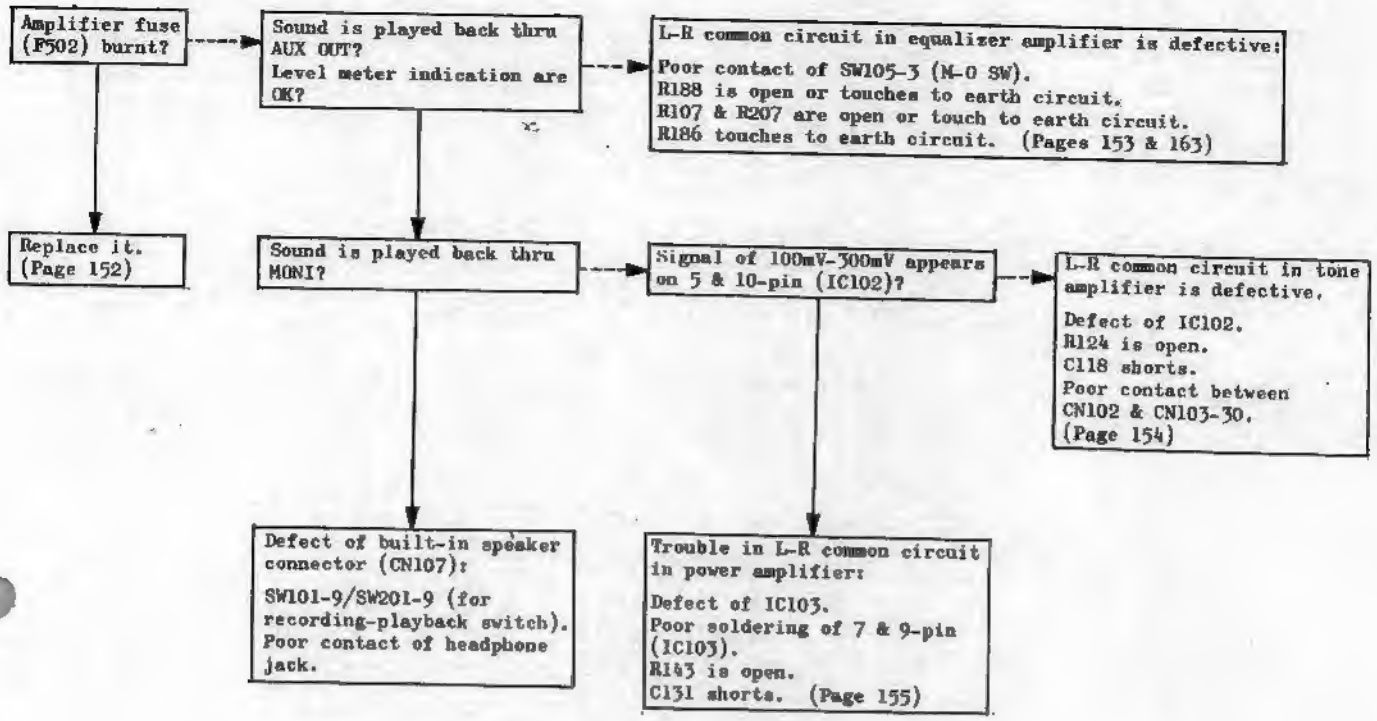


SOUND ISN'T PLAYED BACK THRU SPEAKER OF R-CHANNEL

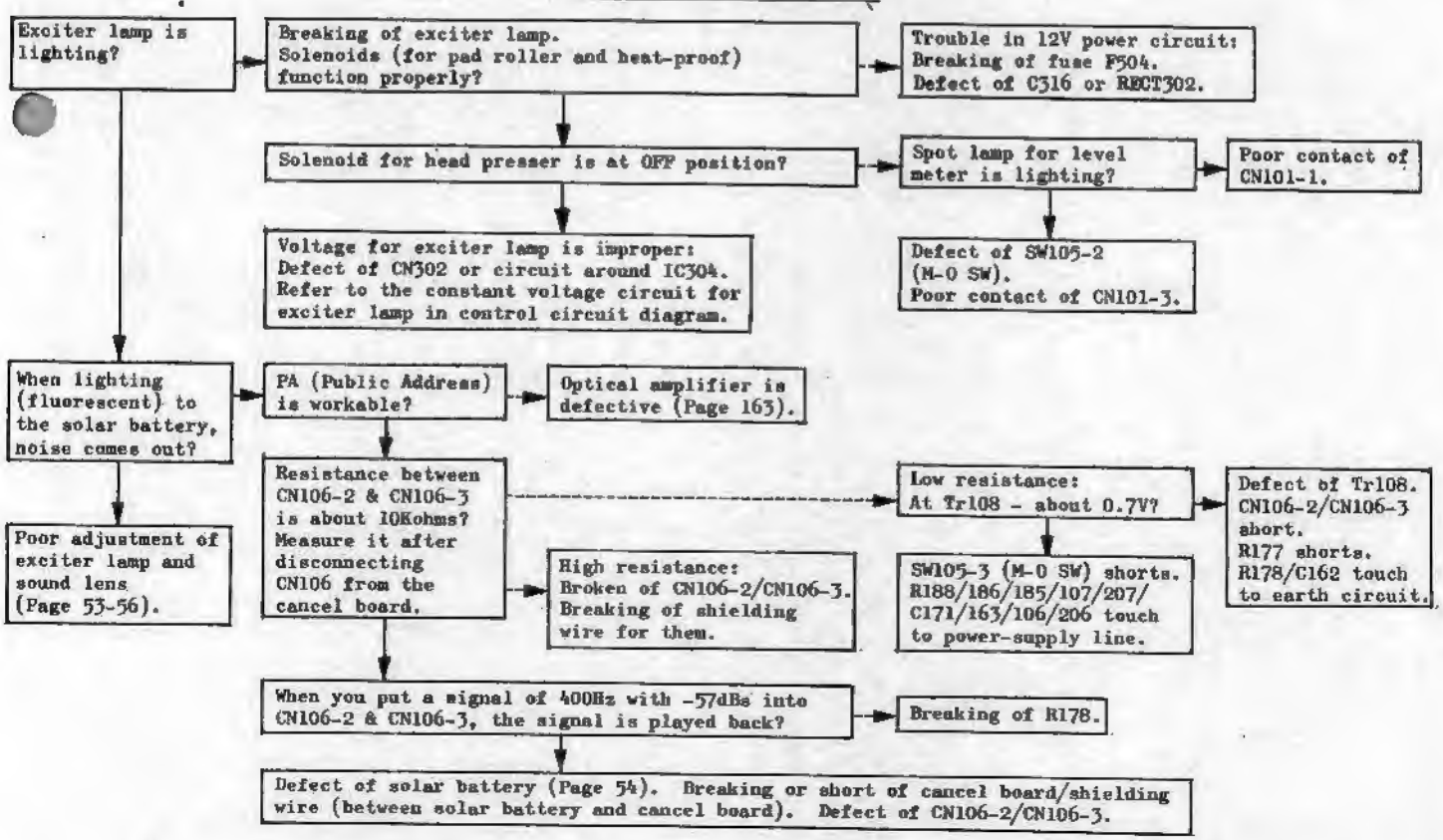
(Refer to R-Channel Circuit corresponding to the reference page in the box)



SOUND ON BOTH TRACKS ISN'T PLAYED BACK THRU SPEAKER



NOT PLAYED BACK OPTICAL SOUND



LEVEL METER (L) OR (R) SHOWS NO INDICATION IN PLAYBACK

(though Sound can be played back thru Speaker)

Sound is played back thru AUX OUT? ---> Defect of IC104-1 or IC104-2 (line amplifier) (Page 156).

Level meter indication is OK in recording? ---> Breaking or poor soldering of level meter:
CN104 (between amplifier & level meter),
C139 or C239 shorts.
D102/D103 or D202/D203 touch to earth circuit.

Trouble in circuit around Tr104 or Tr204 (meter amplifier). (Page 157)

BOTH LEVEL METERS SHOW NO INDICATION IN PLAYBACK

(though Sound can be played back thru Speaker)

Sound is played back thru AUX OUT? ---> Trouble in L-R common circuit in line amplifier:
Defect or poor soldering of IC104.
R155 opens or touches to earth circuit.
C152 shorts. (Page 156)

Defect of CN104 (between amplifier & level meter).
Parts around meter amplifier (Tr104/Tr204) touch to each other. (Page 157)

IC104 (1/2 LA3122) of line amplifier is of composite type, so at first check the applied voltage (+20V at 8-pin) circuit when both level meter indicators do not swing.

SOUND ISN'T PLAYED BACK THRU AUX OUT (L) OR (R)

(though it can be played back thru the Speaker)

Level meter indication is OK? ---> Trouble in circuit around IC104-1 or IC104-2 (line amplifier). (Page 156)

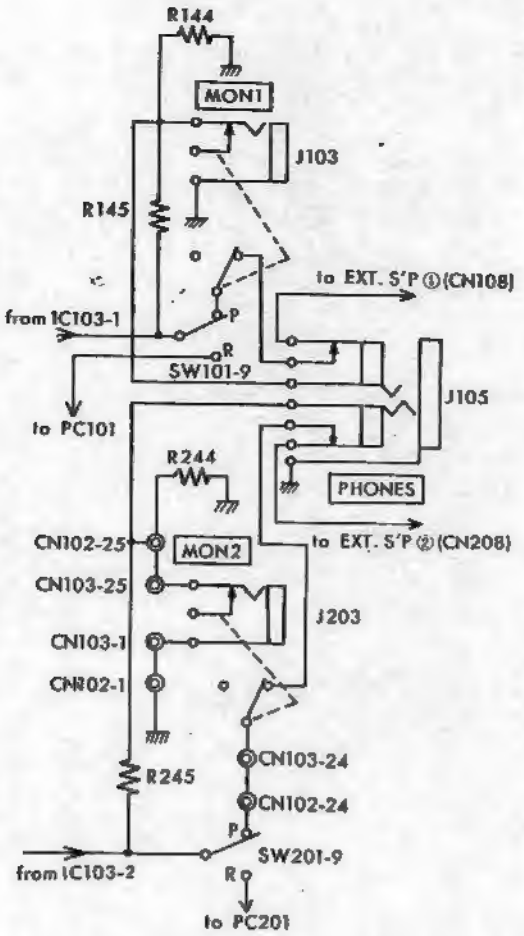
R158 or R248 is breaking or touches to earth circuit. (Page 156)
CN101-28 or CN101-13 (between amplifier and control circuit) is poor contact or touches to earth circuit.
J104 or J204 is defective, poor contact or shorts.

SOUND ISN'T PLAYED BACK THRU BOTH AUX OUT

(though it can be played back thru the Speaker)

Level meter indication is OK? ---> Trouble in L-R common circuit in line amplifier:
Defect or poor soldering of IC104.
R155 is open or touches to earth circuit.
C152 shorts. (Page 156)

R158/R258 are open or touch to earth circuit.
CN101-28/CN101-13 (between amplifier and control circuit) are poor contact or touch earth circuit.
J104/J204 are defective, poor contact or short.



SOUND ISN'T PLAYED BACK THRU MONITOR (L) OR (R)

(though it can be played back thru Built-in Speaker)

Sound is played back thru headphone jack?

→ Trouble in Track 1 (L):
- R144 shorts or touches to earth circuit.
- R145 is open or touches to earth circuit.
- Defect or short of J103/J105.

Trouble in Track 2 (R):
- R244 shorts or touches to earth circuit.
- R245 is open or touches to earth circuit.
- Defect or short of J203/J105.
- CN102-25/CN103-25 touch to earth circuit.

↓

Trouble in Track 1 (L):
- Defect or poor soldering of J103.

Trouble in Track 2 (R):
- Defect or poor soldering of J203.
- Poor contact of CN102-25/CN103-25/CN102-1/CN103-1.

SOUND ISN'T PLAYED BACK THRU HEADPHONE JACK

(It is OK thru Speaker)

Poor contact or defect of J105 (Headphone Jack)

SOUND ISN'T PLAYED BACK THRU EXTRA SPEAKER

(It is OK thru Built-in Speaker)

Track 1: Poor contact or defect of CN108.
Track 2: Poor contact or defect of CN208.

PA (PUBLIC ADDRESS) SYSTEM ISN'T WORKABLE

It is workable when M-O switch is at OPT?

Poor contact or breaking of D111. Poor contact of SW109-2 (Page 163).

Optical sound can be played back:

Defect of IC105 (Optical amplifier) (Page 163).

PA is workable when FWD button is pushed?

Voltage at 7-pin (IC105) is about +19V when SW109 (PA-OFF-ALC) is at PA?

Poor contact of SW109-2. Poor contact or breaking of D111 (Page 163).

Poor contact or short of J106 (PA MIC). R179/R180 are open or touch to earth circuit. SW109-4 shorts (Page 163).

Voltage at base-pin (Tr105) is about +0.7V when SW109 (PA-OFF-ALC) is at PA?

D104 is open, poor contact or touches to earth circuit. R169 is open, poor contact or touches to earth circuit. Defect or poor contact of Tr105 (short between B & E). R270 touches to earth circuit (Page 158).

Resistance between C & E (Tr105) is less than 1Kohm when PA is ON?

Defect or poor contact of Tr105 (Page 158).

Poor contact of Tr105 collector (Page 158). R167/R168 are poorly soldered (Page 158). R265/R266 touch to R268 (they are for Track 2).

SOUND ISN'T PLAYED BACK IN STEREO

(though Stereo-Mono Selector (SW106) is set at STEREO)

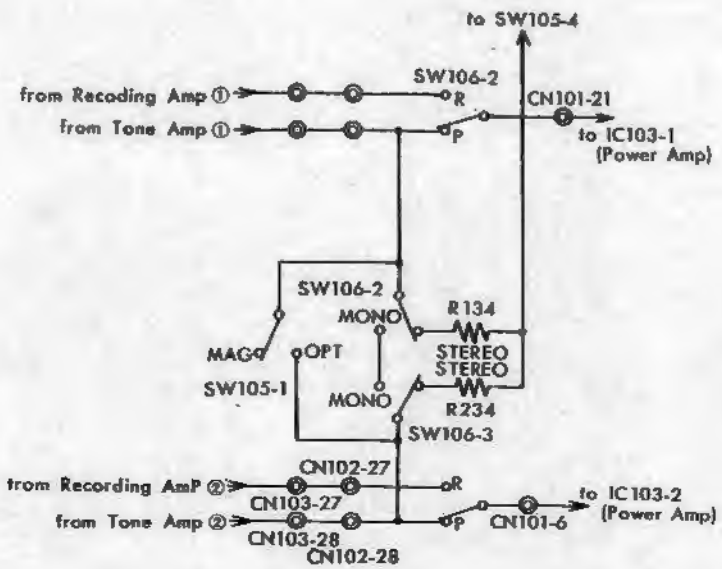
It is OK thru headphone jack (J105)?

Poor contact or breaking of CN107-2 (between control circuit and built-in speaker).

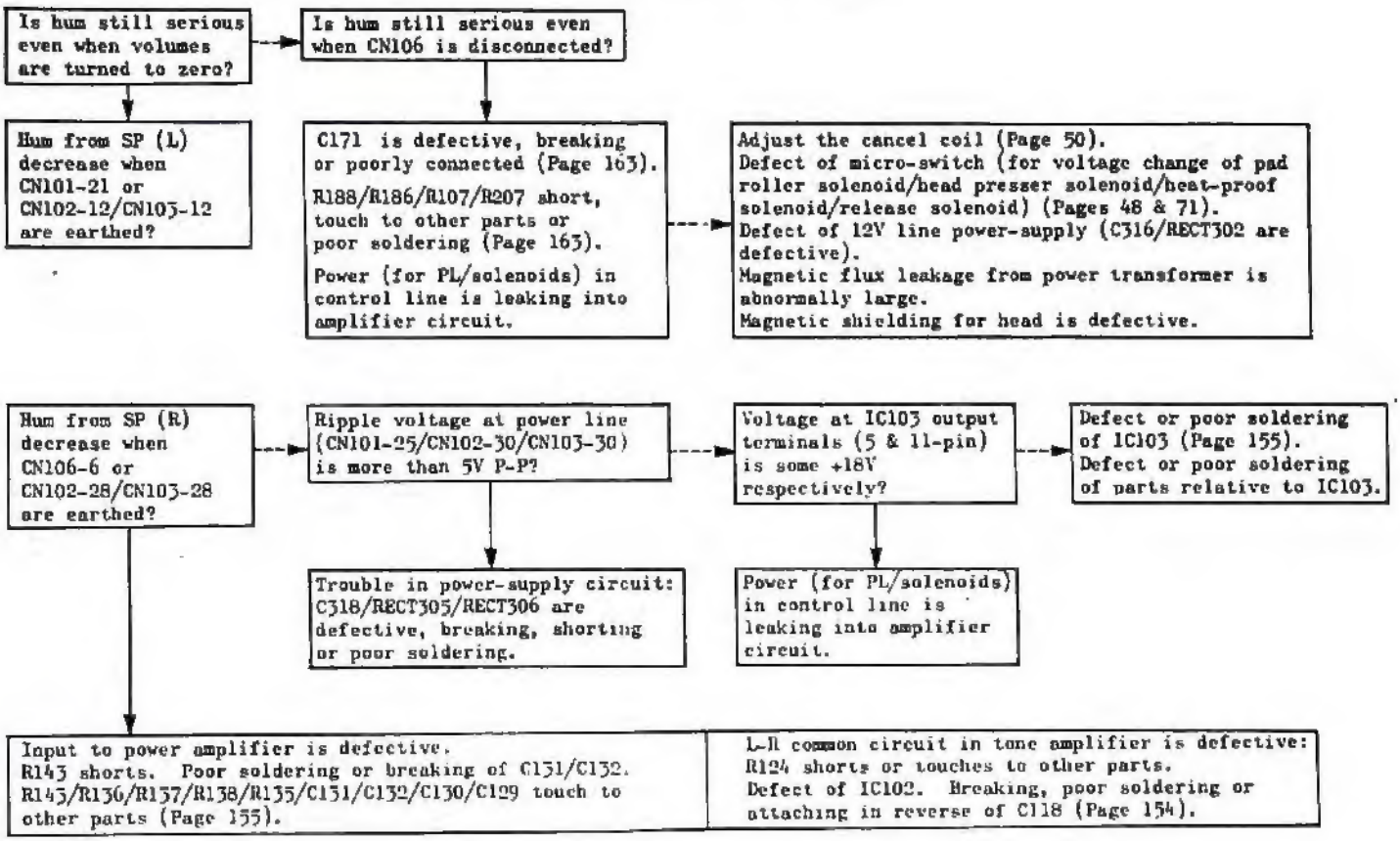
It is OK thru AUX OUT jack?

CN106-6/CN101-21/CN101-8/CN101-23 short. (Page 155)

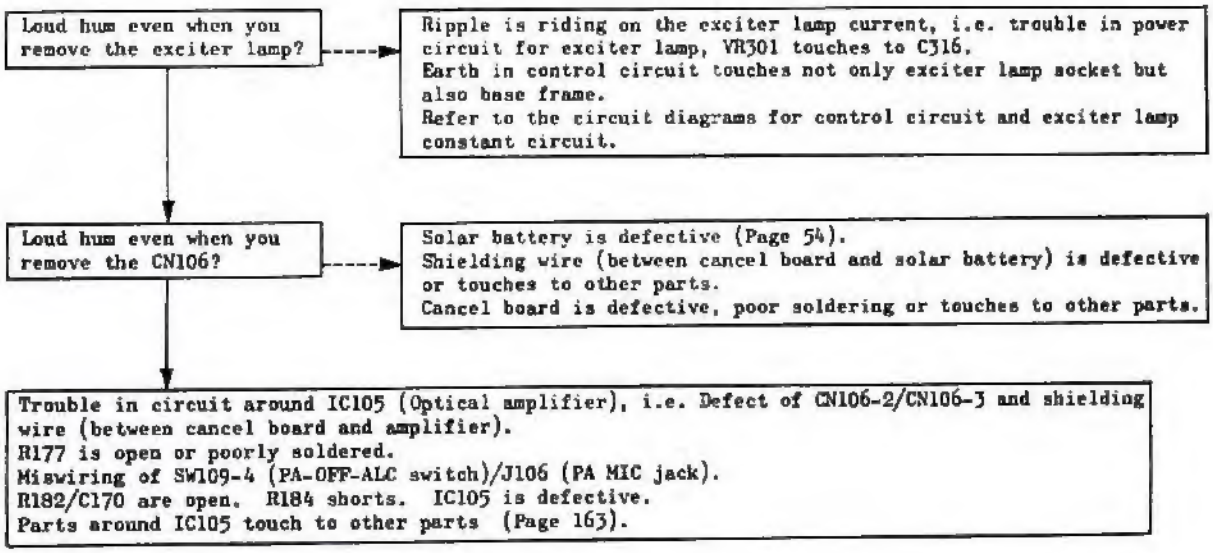
SW105-1 (M-O switch) shorts. SW106-2/SW106-3 (stereo-mono switch) short. Poor contact or short of R134/R234. Poor contact or poor soldering of SW105-4 (M-O switch). IC102 is defective (Page 154).



LOUD HUM IS HEARD THRU BOTH SPEAKERS



LOUD HUM DURING OPTICAL PLAYBACK



OSCILLATION DURING MAGNETIC PLAYBACK

Oscillation at high frequency range:

Earth in amplifier is correctly grounded?
(Resistance value between earth of J201/J102/J202 and base frame is less than 10 ohms).

→ Poor screw tightening of amplifier holder (1) and amplifier board (1). Earth pattern around J101 (MIC) is open. Amplifier isn't attached firmly to base frame. Tighten it with toothed lock washers firmly.

Oscillation stops when you remove CN106 (between amplifier and cancel board)?

→ Gain (400Hz) is NORMAL?
Track 1:
Input - CN106-7/CN106-6
Output - 96dB (Speaker)
60dB (AUX OUT)
Track 2:
Input - CN106-5/CN106-4
Output - 102dB (Speaker)
66dB (AUX OUT)

→ Too large:
Check the under parts -- open/touching to other parts.

		Track 1	Page	Track 2
EQUALIZER	(46dB)	R109/C110	(153)	R209/C210
TONE AMP	(28dB)	R117-R122/VR103	(154)	R217-R222/VR203
LINE AMP	(26dB)	VR154	(156)	VR254
POWER AMP	(40dB)	R139/R140/C133	(155)	R239/R240/C233

Sound head case isn't grounded surely.
Breaking of cancel coil.
Breaking of shielding wire (between cancel board and head).
Breaking of cancel board.

Capacitors for phase compensation or for high-cut are OK?
-- incorrect capacity/soldering.
EQUALIZER (C107/C109/C102)
TONE AMP (C115/C116/C113)
LINE AMP (C149/C150/C147)
POWER AMP (C137/C134/C130)

→ Resolder or replace them.

Poor connection of amplifier input/output circuit:
J105 (headphone jack) wire is too close to connection board (at least more than 10mm).
Wire of J105 is too close to IC101 circuit (Put the wire to J105 upside). Wires for each signal are defective or touch to other parts. Parts touch to each other.
Parts are poorly soldered.

Oscillation at low frequency range:

Disconnect the amplifier from CN101.
Resistance value between
GND INPUT CN101-7/CN101-22 (Pre-amplifier) and
GND OUTPUT CN101-10 (Power Amplifier)
is over 100 ohms?

→ Check the connection between both earth circuits in Power Amplifier and Pre-amplifier.
Attachment of J103 (MONI-L)/J203 (MONI-R)/J105 (Headphone) is improper. Attach them with isolating washer.
Earth terminal of J105 touches to amplifier holder (1) or to VR104 (DOUBLE REC level adjustment) in pre-amplifier.
Earth circuit in power amplifier touches to earth circuit in pre-amplifier.

Gain (400Hz) is normal?

→ Too large:
Check the under parts -- open/touching to other parts.

		Track 1	Page	Track 2
EQUALIZER	(46dB)	R109/C110	(153)	R209/C210
TONE AMP	(28dB)	R117-R122/VR103	(154)	R217-R222/VR203
LINE AMP	(26dB)	VR154	(156)	VR254
POWER AMP	(40dB)	R139/R140/C133	(155)	R239/R240/C233

Defect of decoupling circuit in each amplifier and elements for low-cut.

Track 1	Page	Track 2
C171/R188	(163)	
C106/R107/R108	(153)	C206/R207/R208
C118/R124/C117	(154)	
C152/R155/C151/C251	(156)	
R143/C131/C132/R136/R137	(155)	R238/C232/R236/R237
C156/R164	(157)	C256/R264

OSCILLATION DURING OPTICAL PLAYBACK

Oscillation at high frequency range:

Earth of amplifier is grounded correctly?

→ Poor screw tightening of amplifier holder (1) and amplifier board (1).
Earth pattern around J101 (MIC) is open.
Amplifier isn't attached firmly to base frame.
Tighten it with toothed lock washers firmly.

Oscillation stops when you remove CN106 (between amplifier and cancel board)?

→ Gain (400Hz) is NORMAL?
Input - CN106-2/CN106-3
Output - 81dB (Speaker)
47dB (AUX OUT)

→ Too large:
Check the under parts -- breaking/touching to other parts.

			Page
OPTICAL AMPLIFIER	(42dB):	R182	(163)
TONE AMPLIFIER	(28dB):	R117-R122/C120-C123/ VR103	(154)
LINE AMPLIFIER	(26dB):	VR154	(156)
POWER AMPLIFIER	(40dB):	R139/R149/C133	(155)

Replace solar battery (Page 54).
Defect of shielding wire for cancel coil/solar battery.
Cancel board is open or touches to other circuit.

Capacitors for phase compensation in each amplifier and for high-cut are OK?

OPTICAL AMPLIFIER	:	C165/C167/C168 (Page 163)
TONE AMPLIFIER	:	C113/C115/C116 (Page 154)
LINE AMPLIFIER	:	C147/C149/C150 (Page 156)
POWER AMPLIFIER	:	C130/C134/C137 (Page 155)

→ Replace them.

Poor connection of amplifier input/output circuit:
J105 (headphone jack) wire is too close to connection board (at least more than 10mm).
Wire of J105 is too close to IC101 circuit (Put the wire to J105 upside).
Wires for each signal are defective or touch to other parts.
Parts touch to each other. Parts are poorly soldered.

Oscillation at low frequency range:

Disconnect the amplifier from CN101.
Resistance value between
GND INPUT CN101-7/CN101-22 (Pre-amplifier) and
GND OUTPUT CN101-10 (Power Amplifier)
is over 100 ohms?

→ Check the connection between both earth circuits in Power Amplifier and Pre-amplifier.
Attachment of J103 (MONI-L)/J203 (MONI-R)/J105 (Headphone) is improper. Attach them with isolating washer.
Earth terminal of J105 touches to amplifier holder (1) or to VR104 (DOUBLE REC level adjustment) in pre-amplifier.
Earth circuit in power amplifier touches to earth circuit in pre-amplifier.

Gain (400Hz) is NORMAL?

→ Too large:
Check the under parts -- breaking/touching to other parts.

			Page
OPTICAL AMPLIFIER	(42dB):	R182	(163)
TONE AMPLIFIER	(28dB):	R117-R122/C120-C123/ VR103	(154)
LINE AMPLIFIER	(26dB):	VR154	(156)
POWER AMPLIFIER	(40dB):	R139/R149/C133	(155)

Defect of decoupling circuits in each amplifier and of elements for low-cut.

			Page
OPTICAL AMPLIFIER	:	C164/C166/C170	(163)
TONE AMPLIFIER	:	C118/C117/C120/C121/R124	(154)
LINE AMPLIFIER	:	C151/C152/C153	(156)
POWER AMPLIFIER	:	C131/C132/C133/R136/R137/R138/R143	(155)
METER AMPLIFIER	:	C156/R164	(157)

MUTING DOESN'T WORK IN PLAYBACK

SW109 (PA-OFF-ALC Switch) is at correct position? ---------- Shift the switch to OFF/ALC.

TROUBLE IN TRACK 1:

Voltage at base-pin of Tr101 is +0.7V in operation of REV or OFF?

→ R169/R170/D104/Tr105 touch power-supply line. R112/R165/R166/R167/R168/ C111/C159/Tr101/CN102/ CN103-2 touch earth circuit or short (Page 158).

↓ Tr101 is defective or poorly soldered (Page 158 & 154).

TROUBLE IN TRACK 2:

Voltage at base-pin of Tr201 is +0.7V in operation of REV or OFF?

→ R269/R270/D204/Tr205 touch power-supply line. R212/R265/R266/R267/R268/ C211/C259/Tr201/CN102-16/ CN103-16 touch earth circuit or short.

↓ Tr201 is defective or poorly soldered.

TROUBLE IN BOTH TRACKS:

Remove the amplifier from CN101 (for amplifier and control circuit). Voltage between CN101-16 & CN101-5 is +3V during STOP or REV? 0V during FWD? +10V during THREAD?

→ Trouble in control circuit.

↓ Earth line of EXL socket is exactly grounded to base frame?

→ Earth the EXL socket securely.

↓ Voltage at base-pin of Tr101/ Tr201 is +0.7V (Page 158)?

Normal voltage:

+0.7V .. during REC/PA.
0 V .. during other conditions

→ R168/R268 touch earth circuit. CN101-5 (for amplifier and control circuit) touches other parts.

↓ SW109-2 (PA-OFF-ALC switch) shorts (Page 163) or touches other parts. D104/D204 touch other parts (Page 158).

DIFFERENCE (OVER ±3dB) OF LEVEL METER INDICATIONS

- on Recording & on Playing Back -

Head touch is OK?

→ Readjust the head position. Head is defective. (Pages 39-46 & 49)

NOTE: Head touch varies with kinds of films, usage frequency of films or curling of films, causing level difference in the meter. The level difference within ±3dB, however, is just permissible.

Sound was recorded with proper level?

→ Bias current is OK?

→ Readjust the bias (Pages 162 & 164)

↓ Trouble in circuit of PC101 (photo coupler)/ Tr106/PC201/Tr206 (Pages 155 & 161). R148/C138/D102/R248/C238/D202 are defective. R149/R150 are defective.

Gain of speaker in playback is OK?

→ Too large:
Check the under parts -- open/touching to other parts.

		Track 1	Page	Track 2
EQUALIZER	(46dB)	R109/C110	(153)	R209/C210
TONE AMP	(28dB)	R117-R122/VR103	(154)	R217-R222/VR203
LINE AMP	(26dB)	VR154	(156)	VR254
POWER AMP	(40dB)	R139/R140/C133	(155)	R239/R240/C233

↓ Readjust the VR154/VR254 position. Replace a 4.7KΩ resistor with a 2.7KΩ resistor (R161/R261) before the readjustment (Page 156).

UNABLE TO RECORD ON TRACK 1 OR 2

Track 1. * (Track 2: Refer to Track 2 Circuit)

Set M-O switch to M side.
When REC button is pushed, LED101 (recording indicator) lights up?

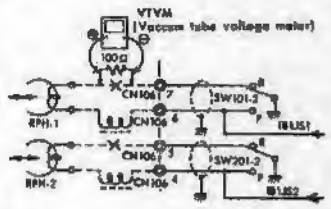
When REC button is pushed, R-P shifting solenoid (SL101)/ SW101 functions well?

Trouble in drive circuit for SL101. (Pages 160 & 161)

Poor contact of SW101-1/CN103-5/CN102-5 (Page 161)

Pushed the FWD button.
Bias oscillator oscillates? (60KHz sine wave of 350Vp-p (130Vrms) comes out across C172?)

Trouble in power-supply section in bias oscillation circuit. D112 is broken or poorly soldered. (Page 161)



Recording bias current is about 400 A?
MEASUREMENT:
Connect a 100 resistor between head and (-) line as shown in the figure.
Set the SW102-1 to NORMAL.
Measure the voltage across the resistor (40mV is OK) with VTVM (Vacuum Tube Voltage Meter).
Check whether the bias current (to voltage of 40-45mV) changes when turning the VR104-1 clockwise.

Sound head is defective (Pages 39-46 & 49).
Maladjustment of VL101 (trap coil)/VR105.
Short, poor contact, touching other parts or breaking of the following parts.

VL101/C144/C145/VR105/C105/C176/SW102/ R152/VR104/CN102-21/CN103-21/CN103-3/ CN103-3/CN102/6/CN103-6/SW101-2.

White wire of shielding wire for CN106-6 touches to the earth circuit or the covering wire. (Pages 153, 161 & 162)

Sound comes from MONI (L) or headphone jack when recording signal is supplied to J101?

Sound comes from MONI (L) or headphone jack when recording signal is supplied to J102?

Trouble in Tr102 circuit of recording amplifier. (Page 159)

Trouble in IC101 circuit of mic-amplifier. (Page 153)

Level meter deflects when recording signal puts in?

Poor contact of SW101-9 (Page 155)

When FWD button is pushed -- resistance value across CdS in PC101 is under 1K :

PC101/R149/R150/C142/C143 touch to earth circuit.

Stop a bias by shorting the C175/R195/R196 to earth circuit.
When recording signal (0VU) puts in, signal across R149 is AC 2.5Vrms?

When OFF button is pushed -- voltage at contact point between R171 & PC101 is +11V?

Breaking of R171.
R171/PC101/Tr106(C) touch to earth circuit. (Page 161)

When REC and FWD buttons are pushed --
voltage at contact point between R171 & PC101 drops to +2V:

Defect or poor soldering of PC101.

Voltage at base-pin of Tr106 is 0.7V?

Defect or poor soldering of Tr106.

Breaking or poor soldering or R172. R172/R173/C160/ Tr106(B) touch to earth circuit or short.
Defect or poor soldering of Tr106. (Page 161)

Breaking of R150/VL (trap coil).
CN102-18/CN103-18/CN102-3/CN103-3 touch to earth circuit or are poorly soldered.
CN101-11/CN101-26/CN405-3/CN405-4/SW404-2 touch to earth circuit. (Page 161)

RECORDING IS IMPOSSIBLE ON EITHER TRACK 1 OR 2

When REC button is pushed, LED101/201 (record indicator) lights?

When REC button is pushed, solenoid & switch for R-P shift operate?

Drive circuit for R-P (Record/Play) shift solenoid is defective (Pages 160 & 161).

SW101/SW201/CN102-5/CN103/CN102-20/CN103-20/D112/D212/R198/R298/R194 are broken, poorly soldered, shorted or touching to earth circuit (Page 162).

When FWD button is pushed, bias oscillator oscillates?

When FWD button is pushed, voltage at Tr111 collector is less than +2V?

3-15V:
Tr109/Tr110 are defective or poorly soldered.
R191/R192/R193/R194/C172/C173/C174/C177/T101 are defective, short or broken.
Tr111/R195/R197/C175/R196 are defective (Page 162).

Over 30V:
Voltage at base-pin of Tr111 is 0.7V?

Poor soldering of CN102-19/CN103-19/R194. R195/R196/R197/C175/ Tr111(B) touch to earth circuit (Page 162).

Broken or bad soldering of Tr111 (Page 162).

Tr106/PC101/Tr206/PC201 are defective or their common circuit is defective (Page 160).

Tr102/Tr202 (recording amplifier) are defective or their common circuits are defective (Page 159).

Voltage across C173 is 20-30V? (Page 162)

0V:
R194/T101 are broken or poorly soldered.
C173 shorts. (Page 162)

Over 30V:
R193 is broken or bad soldered.
C174/T101 (1, 2 & 3-pin) short.
Tr109/Tr110 are defective (Page 162).

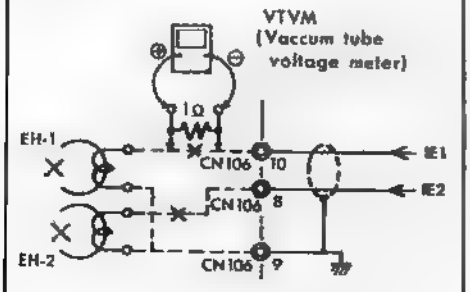
T101 (9, 8 & 7-pin)/C172/VR105/VR205/C176/CN102-23/CN103-23/SW101-8/L102/PL103/PL203/ L202/CN102-7/CN103-7/CN103-22/CN102-22/SW201-8 short or touch to earth circuit (Page 162).

UNABLE TO ERASE SOUND ON TRACK 1

* (Track 2: Refer to the Track 2 Circuit)

Erasing current is more than 110mA?

MEASUREMENT:
Connect a 1 ohm resistor between the erasing head and the shielding wire (white wire) as shown in under figure.
Set the SW102-1 to NORMAL side.
Check the voltage across the resistor.
Over 110mV is OK.



Maladjustment of the head.
Adjust the head touch.
The head is worn-out or defective.
(Pages 40, 42 & 44)

Push the FWD button.
Bias oscillator starts work?

60KHz sine wave of 350Vp-p (130Vrms) comes out across C172.

The oscillator is defective. (Page 162)

CN102-23/CN103-23/SW108/SW102/CN106-8/CN108-10 are poorly soldered.
Shielding wire for CN106-8/CN106-10 is broken.
Shielding wire for head is broken or poorly soldered.
The head is defective. (Pages 40, 42 & 44)

NORMAL RECORDING IS IMPOSSIBLE

(DOUBLE Recording is OK)

Trouble in Track 1:

SW102-3 touches to other circuits.
Erasing head shorts (Pages 40, 42 & 44).
Cancel board/CN106-10/CN106-8 short.
Shielding wire (between amplifier and cancel board/CN106-10/CN106-9/CN106-8) shorts or touches to the earth circuit.
Shielding wire (between erase head and cancel board) shorts or touches to the earth circuit.

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

ALC IS IMPOSSIBLE

Trouble in Track 1:

Muting on playing back is OK? ------> Refer to Page 139.

R146/R166/D101 are broken or touching to other parts.
R147/C140/C141 short or touch to other parts.
SW109-3 is poorly soldered. (Pages 155 & 158)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:

C141/C241/D101/D201 short or touch to the earth circuit.
SW106 touches to other circuits.
SW109-3/SW109-1 touch to other circuits.
(Pages 155 & 158)

LEVEL METER DOES NOT WORK ON RECORDING

(Recording is OK)

Trouble in Track 1:

The meter shows indication on playing back? ----> The meter is defective or broken.
CN104/its wires short or are bad contact.
C139 shorts.
D102/D103 touch to the earth circuit. (Page 157)

R148/D102 touch to the earth circuit or broken.
C138 shorts. (Page 155)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

DOUBLE RECORDING IS IMPOSSIBLE

(NORMAL Recording is OK)

Trouble in Track 1:

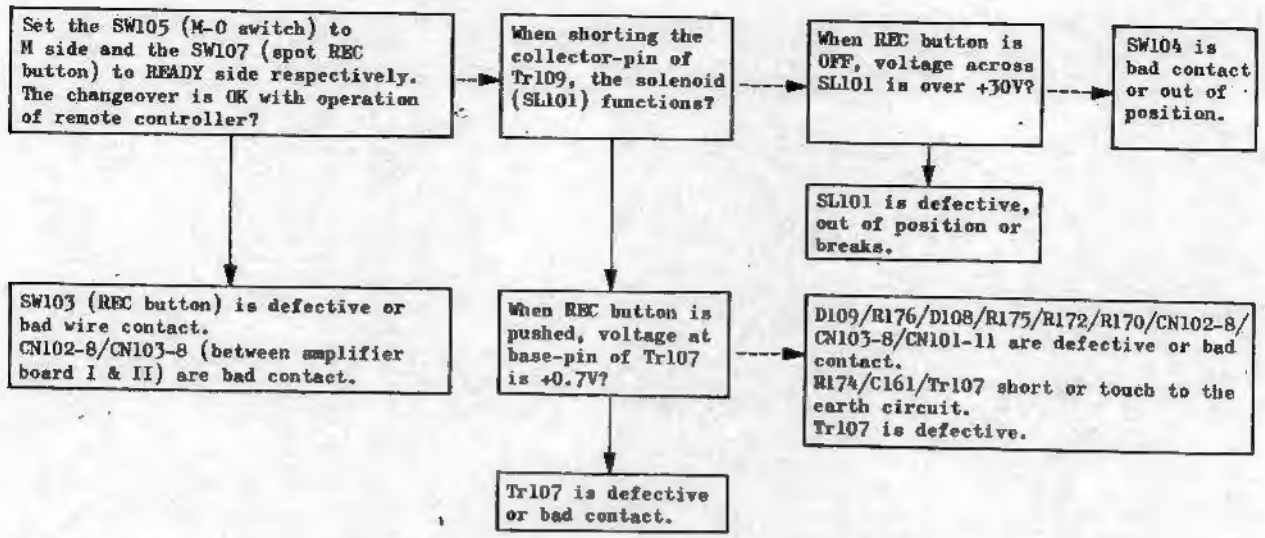
SW102/CN102-21/CN103-21/C176 touch to the earth circuit.
VR104-1 is bad soldering or touches to other parts.
Bad contact of amplifier board I and VR104-1.
L102/SW102-2/SW108 short or touch to the earth circuit. (Page 162)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

R-P (RECORD-PLAY) SOLENOID DOES NOT WORK

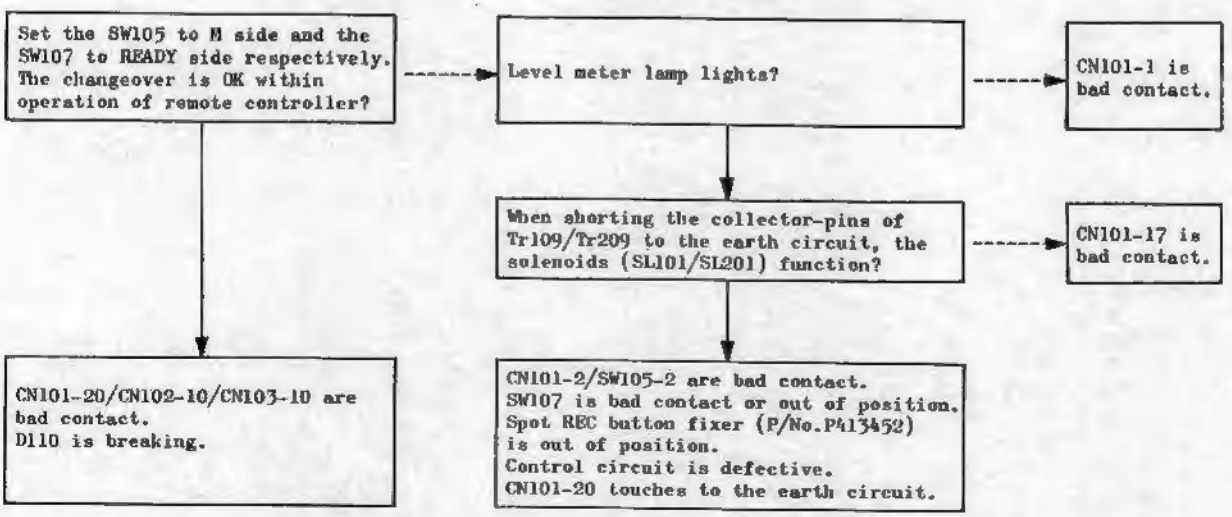
Trouble in Track 1: **(Refer to Pages 160 & 161)**



Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:



HOLDING (R-P SOLENOID) IS IMPOSSIBLE

Trouble in Track 1:

SW101-7 is broken or bad contact.
D107 is breaking.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:

SW108/D107/D207/SW101-7/SW201-7/R171/R271/R197/CN102-19/CN103-7 touch to the other parts.
CN101-19 is bad contact or touches to the other parts.
Control circuit (periphery of Tr316/Tr319) is defective.

R-P SOLENOID VIBRATES WHEN REC BUTTON (SW103) IS PUSHED

Trouble in Track 1:

D105 is defective, breaking or bad contact.
Tr107/R107 are bad contact.
SL101 is bad contact or out of position.
SW104 is out of position.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

SPOT RECORDING IS IMPOSSIBLE

(NORMAL / DOUBLE Recordings are OK)

Trouble in both Tracks 1 & 2:

SW108 is defective, bad contact or out of position. (Pages 160 & 161)

RECORDING STATE IS KEPT ON EVEN WHEN OFF BUTTON IS PUSHED

Trouble in Track 1:

SW108 (SPOT REC switch) shorts or out of position.
CN101-19/CN101-20/Remote connector short.
Wires of D110/SW108 touch to other parts.
Control circuit (periphery of Tr316-Tr319) is defective.
D107/R171/SW101-7 (R-P switch) touch to the other circuits.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above, referring the Track 2 Circuit.

CHANGEOVER FROM SPOT REC TO FWD PROJECTION IS IMPOSSIBLE EVEN BY TURNING SPOT REC BUTTON TO OFF POSITION

(It is possible by operation of OFF button)

Trouble in Track 1:

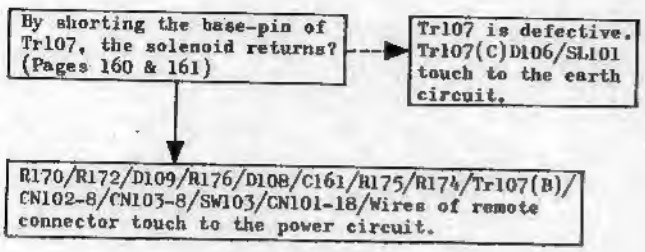
SW107 (READY-OFF switch) shorts.
CN101 touches to the other parts.
Wiring of remote connector is bad.
Control circuit (periphery of Tr316-Tr319) is defective.
D107/R171/SW101-7 touch to the other circuits.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

R-P SOLENOID WORKS AS SOON AS POWER SWITCH TURNS ON

Trouble in Track 1:

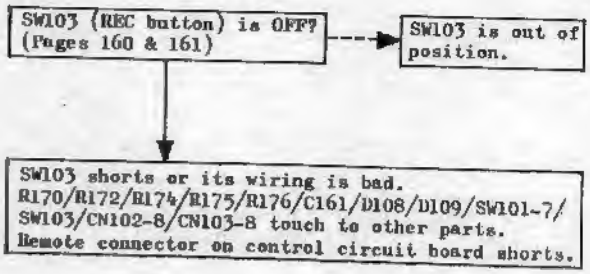


Trouble in Track 2:

Check the similar points to the above, referring to the Track 1 Circuit.

R-P SOLENOID WORKS AS SOON AS SW107 IS SET TO "READY" OR SW105 IS SET TO "M" POSITION

Trouble in Track 1:



Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

AMPLIFIER FUSE (F502) BURNS OUT